

**REMARKS**

Claims 1, 11-14, 18 and 19 have been amended. Claims 1, 11-14, 18 and 19 remain for further consideration. No new matter has been added.

The objections and rejections shall be taken up in the order presented in the Official Action.

3. The specification has been amended to remove the alleged informalities.

4-5. The drawings currently stand objected to for allegedly failing to show every feature of the claimed invention. Specifically, the Official Action contends that “*the shaft must be shown or the feature(s) canceled from the claim(s).*” (Official Action, pg. 3).

It is respectfully submitted that the shaft is illustrated in the drawings as filed – specifically, shaft 26 is illustrated in FIG. 4, and referred to in the specification as filed on page 5, line 11. The embodiment of FIG. 4 was contended to be directed to a second species of the invention in a restriction requirement dated February 21, 2006. In a response to the restriction requirement dated March 20, 2006, the Applicant elected the claims directed to the first species. Notwithstanding the Applicant’s election of the first species, FIG. 4 remains part of the specification as originally filed and is not withdrawn from forming part of the disclosure of the present invention. As FIG. 4 clearly illustrates a shaft 26, it is respectfully submitted that the objection to the drawings is incorrect and should be removed.

6. Claims 11-14 currently stand rejected for allegedly failing to comply with the enablement requirement. Specifically, the Official Action contends that “*regarding claim 11, how can a first*

*gear be in engagement with a cooperating gear while a second gear is not in engagement with the cooperating gear if both gears sit 'loosely' on a shaft? If both gears sit loosely on a shaft or in other words are free to rotate, then upon loading of the system both first and second gears would engage the cooperating gear.” (Official Action, pg. 4).*

It is respectfully submitted that because claim 11 as filed did not contain the “sit loosely on a shaft” language noted above in the Official Action, and instead claim 1 contained such language, the Official Action intended to reject claim 1 for allegedly failing to comply with the enablement requirement.

Nevertheless, both claims 1 and 11 have been amended, and as amended, neither claim 1 nor claim 11 contain the “sit loosely on a shaft” language. Therefore, it is respectfully requested that the enablement rejection is moot.

**7-8.** Claim 1 currently stands rejected for allegedly being indefinite.

Claim 1 has been amended.

**9.** Claim 19 currently stand rejected for allegedly being indefinite.

Claim 19 has been amended.

10. Claims 11-14, 18 and 19 currently stand rejected for allegedly being anticipated by Japanese Patent Publication No. 59117951 to Shinichi (hereinafter “Shinichi”).

### Claim 11

Claim 11 recites a transmission gear assembly operably arranged with a rotatable shaft, that engages a cooperating gear. The transmission gear assembly includes:

“a first gear having a plurality of first gear teeth located along the radial periphery of the first gear; and

a second gear having a plurality of second gear teeth located along the radial periphery of the second gear;

where the first and second gears are operably positioned co-axially on the shaft to allow independent rotation of the first and second gears in the same direction with respect to each other, where the first gear is constructed from a first material and the second gear is constructed from a second material, and where the first gear has a greater elasticity than that of the second gear, such that in the absence of a certain amount of load the first gear is engaged with the cooperating gear and the second gear is disengaged from the cooperating gear.” (cl. 11, emphasis added).

Shinichi is incapable of anticipating claim 11. Specifically, upon a fair and proper reading, Shinichi fails to disclose the claimed feature of “*where the first and second gears are operably positioned co-axially on the shaft to allow independent rotation of the first and second gears in the same direction with respect to each other*.” (cl. 11; emphasis added). Shinichi instead explicitly discloses that the gears 12, 13 are prepared “*as an integral unit*.” (See the “Constitution” paragraph of the Abstract; emphasis added). Further, Shinichi discloses that the gears 12, 13 are combined “*so as to integrally use the gears as one gear*.” (See the “Purpose” paragraph of the Abstract; emphasis added). Thus, Shinichi clearly teaches that the two gears 12, 13 act as a single unit, and as such, the two gears 12, 13 rotate together as an integral unit and do not rotate independently of each other, as recited in claim 11. There is no suggestion in Shinichi that the two gears 12, 13 can rotate independently of each other. A 35 U.S.C. §102 rejection requires that a single reference disclose each feature of the

claimed invention. Thus, for at least the reasons set forth above, Shinichi is incapable of anticipating claim 11.

### **Claim 18**

Since claim 18 currently stands rejected for the same reasons as claim 11, the arguments above with respect to the patentability of claim 11 are applicable to the patentability of claim 18. As a result, it is respectfully submitted that the anticipation rejection of claim 18 is moot and should be removed, and that claim 18 is in condition for allowance and should be passed to issuance.

11. Claims 1 and 11-13 currently stand rejected for allegedly being obvious in view of the combined subject matter disclosed in U.S. Patent 1,803,296 to Bethune and U.S. Patent 3,359,819 to Veillette.

### **Claim 1**

Amended claim 1 recites a gear arrangement operably arranged with a rotatable shaft. The gear arrangement includes:

“a first gear made of a first material and a second gear made of a second material, where the first and second gears are disposed adjacent one another on the shaft, where the elasticity of the first gear is greater than that of the second gear, where the strength of the second gear is greater than that of the first gear, and where the first gear and the second gear are arranged on the shaft such that the first and second gears rotate in the same direction relative to the shaft and independently of each other.” (cl. 1; emphasis added.)

The Official Action recognizes that Bethune fails to disclose the claimed feature of “*the first gear and the second gear sitting loosely on the shaft such that the first and second gears rotate independently.*” (Official Action, pg. 8). However, the Official Action then contends that Veillette “*teach a first gear (14) and a second gear (16) sit loosely on the shaft such that the first and second*

*gears rotate independently (C1/L53) for the purpose of absorbing variations in input torque to provide a smoothed torque on the output shaft.”* (Official Action, pg. 8). The Official Action concludes that *“it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Bethune with first and second gears sitting loosely on the shaft such that the first and second gears rotate independently, as taught by Veillette et al., for the purpose of absorbing variations in input torque to provide a smoothed torque on the output shaft.”* (Official Action, pg. 8). It is respectfully submitted that this rejection is improper for several reasons.

First, contrary to the contention in the Official Action, a fair and proper reading of Veillette indicates that this prior art reference fails to disclose the features of claim 1 *“where the first gear and the second gear are arranged on the shaft such that the first and second gears rotate in the same direction relative to the shaft and independently of each other.”* (cl. 1; emphasis added). In contrast, Veillette discloses that the two gears 14, 16 rotate in **opposite directions** with respect to each other, and not in the **same direction** with respect to each other, as called for in amended claim 1. (see Col. 2, lines 17-20, lines 30-33).

Second, Veillette discloses that a spring 24 connects the gear 14 to the gear 16. (Col. 2, lines 3-4). Significantly, because of this connection between the two gears 14, 16, these two gears cannot rotate independently of each other, as called for in amended claim 1. Thus, Veillette fails to disclose at least two different features of amended claim 1.

Therefore, assuming for the moment without admitting that the Bethune and Veillette are even properly combination, the resultant combination still fails to disclose that the gears rotate in the same direction and that the gears rotate independently of each other. As result, for at least either of these reasons it is respectfully submitted that the combined teachings of Bethune and Veillette are

incapable of rendering claim 1 obvious.

**Claim 11**

Since claim 11 currently stands rejected for the same reasons as claim 1, the arguments above with respect to the patentability of claim 1 are also applicable to the patentability of claim 11. As a result, it is respectfully submitted that the obviousness rejection of claim 11 is moot and should be removed, and that claim 11 is in condition for allowance and should be passed to issuance.

For all the foregoing reasons, reconsideration and allowance of claims 1, 11-14, 18 and 19 is respectfully requested.

If a telephone interview could assist in the prosecution of this application, please call the undersigned attorney.

Respectfully submitted,



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